

6/1/84

Ziegler Chemical & Mineral Corp.

PROPOSED MINE PLAN

ML-46896

NEAL #2 and NEAL #3

Ziegler Chemical & Mineral Corp. proposes to remove Gilsonite from two (2) mines located in ML-46896. This lease is located in Section 32, T11S, R24E in Uintah County, Utah. The lease includes the following described lands:

Township 11 South, Range 24 East, SL Meridian, Uintah County, Utah, Section 32:

SW ¹ / ₄ NW ¹ / ₄ NW ¹ / ₄ ,	SW ¹ / ₄ NW ¹ / ₄ NW ¹ / ₄ ,	NW ¹ / ₄ SE ¹ / ₄ NW ¹ / ₄ ,
S ¹ / ₂ SE ¹ / ₄ NW ¹ / ₄ NW ¹ / ₄ ,	N ¹ / ₂ SW ¹ / ₄ NW ¹ / ₄ ,	N ¹ / ₂ SW ¹ / ₄ SW ¹ / ₄ NW ¹ / ₄ ,
SE ¹ / ₄ SW ¹ / ₄ NW ¹ / ₄ ,	NW ¹ / ₄ SE ¹ / ₄ NW ¹ / ₄ NW ¹ / ₄ ,	NW ¹ / ₄ NE ¹ / ₄ SE ¹ / ₄ NW ¹ / ₄ ,
S ¹ / ₂ NE ¹ / ₄ SE ¹ / ₄ NW ¹ / ₄ ,	S ¹ / ₂ SE ¹ / ₄ NW ¹ / ₄ ,	NE ¹ / ₄ NE ¹ / ₄ NW ¹ / ₄ SW ¹ / ₄ ,
N ¹ / ₂ NW ¹ / ₄ NE ¹ / ₄ SW ¹ / ₄ ,	NE ¹ / ₄ NE ¹ / ₄ SW ¹ / ₄ ,	NE ¹ / ₄ SE ¹ / ₄ NE ¹ / ₄ SW ¹ / ₄ ,
N ¹ / ₂ NW ¹ / ₄ SE ¹ / ₄ ,	N ¹ / ₂ SW ¹ / ₄ NW ¹ / ₄ SE ¹ / ₄ ,	SE ¹ / ₄ NW ¹ / ₄ SE ¹ / ₄ ,
N ¹ / ₂ NW ¹ / ₄ SE ¹ / ₄ SE ¹ / ₄ ,	NE ¹ / ₄ SE ¹ / ₄ SE ¹ / ₄ ,	N ¹ / ₂ NE ¹ / ₄ NW ¹ / ₄ NW ¹ / ₄ ,
N ¹ / ₂ NE ¹ / ₄ NW ¹ / ₄ ,	N ¹ / ₂ SE ¹ / ₄ NE ¹ / ₄ NW ¹ / ₄ ,	S ¹ / ₂ NW ¹ / ₄ NW ¹ / ₄ SW ¹ / ₄ ,
S ¹ / ₂ NW ¹ / ₄ SW ¹ / ₄ ,	S ¹ / ₂ SW ¹ / ₄ NE ¹ / ₄ SW ¹ / ₄ ,	SW ¹ / ₄ SW ¹ / ₄ NE ¹ / ₄ NW ¹ / ₄ ,
NW ¹ / ₄ NW ¹ / ₄ SW ¹ / ₄ SE ¹ / ₄ ,	S ¹ / ₂ NW ¹ / ₄ SW ¹ / ₄ SE ¹ / ₄ ,	SW ¹ / ₄ NE ¹ / ₄ SW ¹ / ₄ SE ¹ / ₄ ,
S ¹ / ₂ SW ¹ / ₄ SE ¹ / ₄ ,	NW ¹ / ₄ SW ¹ / ₄ SE ¹ / ₄ SE ¹ / ₄ ,	S ¹ / ₂ SW ¹ / ₄ SE ¹ / ₄ SE ¹ / ₄ , S ¹ / ₂ SW ¹ / ₄ .

The Neal #2 mine is located in the NE¹/₄SE¹/₄NE¹/₄SW¹/₄ of section 32, and the Neal #3 mine will be located in the N¹/₂SW¹/₄NW¹/₄SE¹/₄, again, in section 32. The Neal #3 will be located approximately 430 feet to the southeast from the Neal #2 location, along the strike of the vein. Ziegler Chemical has previously mined from one (1) shaft (Neal #1) located in the N¹/₂SW¹/₄SW¹/₄NW¹/₄ also of section 32. A topographic map showing the area covered by ML-46896 and the locations of both the Neal #2 and Neal #3 is enclosed.

In order to supply the appropriate quality and quantity of Gilsonite requested by our customers, ZCMC would like to recommence mining operations immediately upon approval of this mine plan. Whereas; some mining has occurred at the Neal #2 location (SE¹/₄NE¹/₄NE¹/₄SW¹/₄). ZCMC will, upon approval of this mine plan, continue mining at this location. ZCMC will mine downward lengthening the slopes as the ore is mined.

Approximately 430 feet from the present mine opening to the southeast along the strike of the vein the Neal #3 mine location will be built to provide for an escape route for the Neal #2 mine. ZCMC will place a derrick and hoist house for raising and lowering men from the mine at the Neal #3. An ore bin and airlift system will be installed at both mine sites to remove ore.

The escapeway will consist of a drift between the Neal #2 and Neal #3 mined 35 feet below the surface to within 25 feet of the southeast property line, approximately 495 feet from the Neal #2 mine opening.

It is estimated that the Neal #2 and Neal #3 will produce 20-30 tons of Gilsonite a day. It is anticipated that one crew will work both of these mines. The normal workforce would include two underground miners, one hoistman at the surface and on occasion one timberman. If demand increases more crews will be put in place to meet our customers needs. The ore mined will reach the surface in an ore bin, from which it will be loaded into covered trucks and transported to ZCMC facilities at Little Bonanza.

From the King's Well road, Ziegler will maintain approximately 7,000 feet of access to the Neal #2 mine. This old two-track road has been graded to a width of 14 feet. A new roadway to access the Neal #3 mine will need to be constructed. The new road will be approximately 1,000 feet long by 14 feet wide. Due to the grade of the terrain Construction of this road will require cut and fill. In addition, an area 150 feet by 300 feet will be leveled by cut and fill at the location of the Neal #3 hoist house and compressor shed. Each mine site will be approximately 150 feet wide by 300 feet long. The access roads to the Neal #2 site and the proposed road to the Neal #3 site, combined are about 2,000 feet long. The two (2) mine sites (150 x 300 x 2 / 43,560 sq. ft.) and the two (2) new roadways (1,000 x 14 x 2 / 43,560 sq. ft.) will disturb about 2.7 acres.

A portal will be built at the entrance of the Neal #2 mine to facilitate entry and exit of men and equipment. At the Neal #3 mine, a concrete collar approximately 18 x 4 feet will be constructed at the surface to stabilize the shaft opening. All openings in the ground (shafts and escapeways) would be fenced with chain link fencing. All enclosures would have gates with locks to provide a first line of security. Sufficient area inside the fenced area would be maintained for ingress and egress. The gates would be locked when the mine is not in operation. Signs will be placed in order to warn the public of mining operations.

A number of facilities other than the openings for the mine shaft and escapeways would be located on the surface, including:

- A hoist house and headframe to raise and lower the conveyance in the shaft at Neal #3.
- A 25-30 ton ore bin for the storage and loading of Gilsonite will be located on each mine site.
- A dust collector will be placed on the top of each storage bin to remove dust from the airlift system.
- Airlift fans will be installed on a pad next to each headframe. These fans are designed to lift ore to the surface through a 12-inch pipe in the utility shaft.
- A compressor shed, for the diesel-powered compressor.
- Topsoil from disturbed areas would be stored in piles in the immediate vicinity of the area from which it was removed. The topsoil pile will be seeded to stabilize it for future reclamation use.
- A small waste rock pile. It is anticipated that very little waste rock would be produced. Only the Gilsonite would be extracted from the vein.
- Electricity to supply power to the hoists, compressor, and fans would be provided by a diesel generator.

No water would be used in the mining operation. Any underground water encountered will be handled in accordance with federal water regulations and requirements.

Three Ansul 20-pound fire extinguishers would be on hand: two in the hoist house, and one by the compressor. All rules and regulations regarding fire prevention would be strictly adhered to. If a fire grows so large that it cannot be controlled with fire extinguishers, Deseret Generation and Transmissions fire crew will be called to assist in fighting the fire. Uintah County/Vernal City will also be called as back up. If an under ground fire occurs, the mine would be sealed. In order to prevent an underground fire, the following precautions will be taken:

- All combustible materials including vegetation will be kept away from mine openings;

- Fire retardant paint will be put on all timber used in mine openings;
- No electrical equipment will be used underground; and
- Smoking and smoking materials will be prohibited underground.
- There will not be any explosives stored at the mine site.

Miners will be instructed to maintain a clean camp and to report any unusual activities that could be detrimental and/or unlawful. In order to minimize impacts to the environment from personnel involved in mining activities, employees would be subject to the following regulations:

- No open fires of any kind except in approved buildings in approved stoves or furnaces.
- No illegal harassing or shooting of wildlife.
- No trash left in any unauthorized place.
- No unnecessary off-road driving.
- No collecting of plants.

For safety and mine efficiency, mobile telephone communications will be maintained between the mine and the Ziegler office in Little Bonanza.

All garbage and solid wastes (other than waste rock) will be placed in covered 55-gallon cans then taken to a Dumpster, located on ZCMC property. A commercial operator will then haul the Dumpster to the county landfill. A toilet will be located at the mine site for use by ZCMC personnel. A 10-foot deep pit will be dug underneath the toilet facility to accommodate sewage, which will be allowed to decompose in-situ.

When the mineshafts and escapeways are ready for closure, final designs would be submitted to the Division before seal construction. The collar and other structures will be removed. The mine openings will be sealed with 18-inch thick concrete reinforced with rebar placed on 12-inch centers. If the seal is to be in an exposed rock outcrop, the top of the seal will be constructed to conform to the contour of the outcrop and will be no higher than the adjacent rock. The bottom of the seal would be

placed on bedrock. If the seal is location where soil would cover the seal, the bottom of the seal will be placed on bedrock and covered with a minimum of 4 feet of topsoil.

Upon completion of mine operations, all machinery, equipment, and debris would be removed from the site. The site would be graded to conform as closely as possible to premining conditions. The reclaimed area will be scarified, and re-vegetated with a seed mixture approved by D.O.G.M

The following is a table of estimated reclamation costs for the Neal #2 and Neal #3 mines.

Ziegler Chemical & Mineral Corp.
Reclamation Estimate
ML-46896, Uintah County, UT
Neal #2 & #3 mines
<u>Unit costs in this estimate are from the Means Heavy Construction Cost Data 2001 book.</u>

<u>Structure removal</u>	<u>#units</u>	<u>units</u>	<u>\$/unit</u>	<u>\$ amount</u>
Crane, 55 ton & oper.	8	hrs	169.91	\$ 1,359.28
Tractor, trailer	32	hrs	90	\$ 2,880.00
<u>Capping</u>				
concrete	13.5	CY	100	\$ 1,350.00
1carpenter foreman	80	hrs	45.6	\$ 3,648.00
2 carpenter helpers	160	hrs	34.7	\$ 5,552.00
forms, etc. (SUM)	52	sum	7.2	\$ 374.40
rebar (SUM)	22	sum	5.3	\$ 116.60

Earthwork & Grading

Dozer, 300 H.P.	40	hrs	136.69	\$ 5,467.60
backhoe & operator	24	hrs	116.53	\$ 2,796.72

Revegetation

tractor + drill + operator	16	hrs	66.76	\$ 1,068.16
seed mix @ 12 lbs./acre	2.7	acre	36.25	\$ 1,174.50
fertilizer @ 200 lbs./acre	2.7	acre	0.14	\$ 75.60

TOTAL	<u>\$25,862.86</u>
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